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Halal-organic meat: a successful business and humanitarian model

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This study develops a conceptual model that investigates how self-determination needs, religiosity, and features of halal-organic meat influence consumer satisfaction and meat-purchasing behavior; these in turn affect healthy life expectancy, health- and food-related quality, and tranquility of life. In Bangladesh, a Muslim-majority country, organic meat producers usually sell halal meat without certifying or labeling it as such. According to the study, if meat producers market products that are both halal and organic, they will appeal to Muslim customers in religious and health-related contexts. This may lead to a significant increase in meat sales, thereby assisting more businesses in profits. The study used Purposive sampling to collect 985 data points from consumers who buy organic meat through four marketing channels: supermarkets, municipality corporate markets, open-air markets, and online markets. The data were analyzed using SmartPls 3.0. The results confirm that five independent variables—autonomy, competency, relatedness, religiosity, and halal-organic food—directly and positively influence consumers' satisfaction with and continuance of halal-organic meat-purchasing behavior. The study also suggests that consumer satisfaction positively impacts halal-organic meat-purchasing behavior. This positively and significantly influences three dependent variables: consumers' desire to maintain a healthy life expectancy, health- and food-related quality, and tranquility of life. The findings further indicate that halal-organic meat-purchasing behavior mediates the relationships between the study's five independent variables and three dependent variables. This study investigates the new, growing theory of self-determination in relation to organic and halal food-purchasing research, which few studies have investigated. Although the literature surrounding halal and organic meat is not new, this study is the first to combine these two fields into a distinct body of knowledge. Furthermore, this is the first study to introduce the constructs of tranquility and life expectancy in organic and halal food-purchasing behavioral research.

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Introduction

Sold along with conventional meat, organic meat can be found in a special corner of superstores in Bangladesh. Although their packages do not explicitly mention that the meat is halal, birds and animals are slaughtered in a halal manner, with the meat prepared in accordance with Muslim laws. This is because as Bangladesh is a Muslim-majority country, all meat is generally considered halal since everyone is expected to follow actions prescribed in Muslim laws. Although there are several organic meat sellers in the country, there is no business model that combines the concept of halal with organic meat. However, such a model could make consumers more interested in purchasing meat. The concept of halal-organic meat implies that Muslims are obeying Allah while eating safe meat. As a result, Muslim consumers adhere to both their religious sentiments and healthy lifestyles, and meat sellers can generate a dramatic increase in sales.

Furthermore, Nugraha et al. (2022) confirmed that Taiwanese non-Muslim consumers showed a higher intent to purchase halal meat, as butchers adopted cold storage techniques to keep the meat fresh. Hence, the study argues that despite Muslim religious values, many non-Muslims, atheists, and unaffiliated people around the world may prefer to consume halal-organic meat because it is pure, natural, authentic, and safe by definition (Ambali and Bakar, 2014; Codex Alimentarius, 2020). Additionally, due to the COVID-19 pandemic, the demand for healthy and safe food is increasing worldwide. The study's findings thus aim to revolutionize food sales, not only in Bangladesh but also among both theist and atheist consumers around the world.

This study further investigates how the self-determination needs and attributes of halal and organic meat influence consumers' purchasing behavior, which in turn affects their sanctity of life. Although past studies on halal and organic food are comprehensive, this study is the first to combine the two products and innovate a new product of halal–organic food. This research has considered the studies of both halal and organic food, as well as a few other studies on general food purchasing, anticipating that these findings will help understand consumer behavior and formulate a model for halal-organic food.

Moreover, this study considers the self-determination need theory, which has rarely been investigated in organic and halal food-purchasing research. For instance, although Di Pasquale and Rivolta (2018) and Reznickova and Zepeda (2016) examined this theory in organic food-purchasing research, it has not been addressed in halal food-purchasing research. Investigating this theory in the context of halal and organic food-purchasing research could lead to more interesting outcomes and findings relevant to further testing.

Religion plays an important role in shaping people's attitudes and behaviors (Armstrong, 2001; Arnould et al., 2004). Although halal food researchers place a high value on religiosity, organic food scholars have yet to pay much attention to it. Furthermore, two different streams of research have found that religiosity has an effect and no effect on purchasing halal food. Billah et al. (2020), Widodo (2013), Ambali and Bakar (2014), Ahmadova and Aliyev (2020), and Alam et al. (2011) indicated that religiosity influences the purchase of halal food. On the other hand, Garg and Joshi (2018) claimed that religiosity does not affect halal food purchasing. Hence, there is a knowledge gap regarding how religiosity influences consumers' intentions to purchase organic food.

Religiosity may also bring satisfaction to believers. However, although Suhartanto et al. (2019) found that religiosity has a positive and significant influence on consumer satisfaction, few studies have examined its relationship with the purchase of halal and organic food. Thus, further investigation of these relationships is needed to bridge the knowledge gap.

Consumers usually purchase halal and organic foods for health reasons, mainly because they are perceived as safer than conventional foods. Most studies in both the halal and organic fields have examined how health concerns affect consumers' purchasing behavior. As both fields of research have emphasized the importance of health, this study combined the two fields in order to observe the health benefits of halal-organic food, recognizing this as an important construct that should not be overlooked.

Furthermore, when consumers buy halal and organic foods for health reasons, this leads to higher satisfaction. Similarly, Suhartanto et al. (2019) identified a significant positive relationship between the health benefits of halal food and satisfaction, whereas Paul and Rana (2012) discovered a significant positive relationship between the health benefits of organic food and satisfaction. In light of the above findings, this study also considers the relationship and attempts to investigate how the health benefits of halal-organic meat generate consumer satisfaction.

When consumers are satisfied, they may feel pleased, thus fostering their intent to purchase again. Hence, there is a relationship between customer satisfaction and repeat purchasing behavior. Few studies have explored this relationship in the context of purchasing halal and organic food. Ali et al. (2020) and Ali et al. (2018) investigated satisfaction and halal food-purchasing behavior, whereas Seconda et al. (2017) investigated satisfaction and organic food-purchase behavior. Recognizing this relationship, the current study explores how satisfaction influences consumers' halal-organic food-purchasing behavior.

Humans have a general expectation of living a healthy, disability-free life. However, there is a gap in the literature regarding how halal or organic foods affect consumers' life expectancy. Although Sayogo (2018) investigated the relationship between halal food-purchasing behavior and healthy life expectancy, few studies have researched the relationship between organic food-purchasing and life expectancy. This study will thus focus on the aforementioned relationship, and more studies should focus on halal and organic food purchasing as well.

People with a healthy life expectancy may also desire a life of tranquility, as well as health- and food-related quality. However, few studies have considered the impact of halal and organic food-purchasing behavior on health- and food-related quality as well as the tranquility of life. Therefore, more research should address the significant knowledge gap in purchasing halal and organic food.

In light of the above discussion and knowledge gap, this study attempts to answer the following research questions:

- How do self-determination needs, religiosity, and halal-organic meats' health benefits influence consumer satisfaction and meat-purchasing behavior?
- In turn, how do consumer satisfaction and meat-purchasing behavior affect life expectancy, health- and food-related quality, and tranquility of life?

This study contributes to the literature in various ways. First, the study creates an entirely new and distinct field of knowledge termed "halal-organic." Second, the study tests self-determination theory in a new field of knowledge. This theory has received little attention in research on organic and halal food purchasing, let alone on halal-organic foods. As a result, this study contributes to the generalizability of this theory. Third, other researchers in similar research areas could use the study's constructs to better understand the motivations that influence consumers' meat-purchasing behavior. Fourth, the findings of this study will help

halal and organic meat marketers potentially increase their profits, encourage new investments and employment in halal-organic food businesses, and contribute to the country's economic development. Fifth, the new business concept can be replicated by other meat marketers operating abroad to launch a new halal-organic meat business that can generate huge profits. Sixth, the new business concept may target not only Muslims but also non-Muslims and atheists who are concerned about the quality and safety of the meat they consume. People strive to achieve peace and tranquility in their lives, serving prominence in the final contribution of this study in that it will also attract consumers who want to establish sanctity in their lives through religious practices and eating habits.

The research topic is vital in the context of Bangladesh. Because 91.04% of the Bangladeshi population is Muslim, they are obliged to consume halal food, which is hygienic, clean, qualitative, healthier, and better for the diet (Ahmadova and Aliyev, 2020). Furthermore, religious people prefer local brands (Wilkes et al., 1986), and organic food is referred to as local food in Bangladesh (Prince and Wahid, 2020). Although most religions recommend eating safe food (Pratiwi, 2018), the majority of conventional birds and animals in Bangladesh are often fed antibiotics, genetically modified organisms, and scraps of tannery waste to stimulate their growth, and there are chemicals in their meat to prolong their shelf life. On the other hand, the term "halal-organic" may conjure up images of the meat's naturalness and cleanliness, as well as observance of Islamic practice, in consumers' minds; these images are true to the nature of the concept. Thus, "halal-organic" meat has the potential to stand out in the market and significantly increase consumer interest in meat.

Literature review

Halal meat. Halal foods are allowed under Islamic dietary guidelines and prepared according to permitted customs. Cattle, sheep, goats, camels, deer, poultry, and other animals slaughtered using the halal method are permitted for human consumption (Dwiyitno, 2014). The avoidance of pork, carrion, blood, alcoholic drinks, products of carnivorous animals, and other creatures that are harmful or offensive to the psyche is prohibited in Islam (Chaudry and Riaz, 2014).

Scientific literature states that halal (i.e., the method of slaughter that kills birds and animals with a deep cut across the neck) produces meat that is more tender, stays fresh for longer periods of time, and is less painful to the animal (Sinha et al., 2012). If a food is deemed halal, it has been prepared, processed, and manufactured using instruments or ingredients that are considered pure in accordance with Hukum Shariah; in other words, halal meat contains no impurities according to Hukum Shariah (Ambali and Bakar, 2014). Thus, foods that are produced in line with halal prescriptions are readily acceptable to both Muslim consumers and consumers of other religions (Ambali and Bakar, 2014).

Today, the halal concept of food goes beyond the understanding of religious values. It represents the hygiene, cleanliness, and quality of food consumed (Mathew, 2014). As Islam prescribes an elegant and healthy manner of living in every aspect, the halal way of food preparation also ensures that the item is pure, authentic, and free from any element that may be remotely harmful to the human body. Moreover, such food habits ensure an active and robust mind, leading to a long, healthy life. Ultimately, the purpose of halal is not to further religious values but rather to initiate a higher quality of life.

Organic meat. According to the Codex Alimentarius (2020), a set of universally accepted food health and food quality principles, codes of practice, guidelines, and other recommendations, organic foods originate from an organic farm system that supports the ecosystem. Organic livestock for meat, eggs, and dairy products must be raised in living conditions that allow them to express their natural behaviors (e.g., being able to graze on pasture) and be fed organic feed and forage. They may not be administered any undue antibiotics, growth hormones, or any animal by-products. Hence, organic food is a healthy, safe, nutritious, and eco-friendly product (Prince, 2019).

In Bangladesh, birds and animals are frequently fed polluted low-cost poultry feed, as well as non-nutritional feed containing antibiotics, antifungals, arsenicals, genetically modified organisms, and hormones to stimulate their growth, resulting in contaminated meat. Cheap poultry are an important part of the national diet, accounting for 75% of the national demand for meat (Prince, 2018). The consumption of organic meat, which is considered safe food (Liu et al., 2013), therefore may be in high demand to alleviate the country from such unhealthiness and uncleanliness.

Halal-organic meat. This study combined the features of halal and organic meat and suggested a "halal-organic" model. As a Muslim-majority country, meat in Bangladesh is generally considered halal, and there are many vendors of organic meat throughout the country. However, organic meat producers have not yet developed the economic concept of combining these two characteristics into "halal-organic" meat. Such a product would imply that meat is not only organic, or natural, safe, and pure (Alimentarius, 2020), but also halal, or tender and fresh with religious approval (Sinha et al., 2012). Islamic dietary law also states that food is halal if it is prepared, processed, stored, packaged, handled, and transported in a hygienic manner (Pratiwi, 2018).

Innovation must distinguish a product from its competitors while catering to consumer preferences (Habib, 2019). This study argues that the innovation of halal-organic meat would minimize the gap between organic and conventional meat in Bangladesh, which accounts for approximately 99% of the overall market (Rahman, 2019). Moreover, generating and marketing a new term may lead to more nuanced purchasing behavior among the public. The market audience is also likely to develop a new fondness for such products promising a happier, healthier life.

This is the first study to attempt to establish the concept of halal-organic food and introduce a distinct body of knowledge into academia.

Self-determination need theory. The self-determination need theory suggests that people are motivated to grow and change through three innate and universal psychological needs: autonomy, competence, and relatedness. This theory suggests that people can become self-determined when their needs for competence, connection, and autonomy are fulfilled. Psychologists Edward Deci and Richard Ryan first introduced their ideas on this theory in their 1985 book: *Self-Determination and Intrinsic Motivation in Human Behavior* (Kilpatrick et al., 2002).

Autonomy is characterized by an internal locus of control and the perception that behaviors are freely chosen (Kilpatrick et al., 2002). According to research, halal-organic foods have greater control in the market because they stand out from other conventional food items. In other words, Muslim consumers willingly and freely choose halal-organic food over conventional foods because of their compliance with Islamic regulations and higher naturalness. Thus, this study argues that halal-organic food provides consumers with more autonomy and greater control in the market than conventional food does; this makes halal-organic food more preferable to consumers.

Competence is characterized by a sense of mastery and the perception of being effective in the things we do (Kilpatrick et al., 2002). In this study, the competence of halal-organic food refers to its effectiveness in terms of quality and goodwill, such as health safety and nutritional benefits, and Muslim religious image, such as halal, over conventional foods. This study assumes that when customers buy and consume halal-organic foods, they feel more competent and effective than when they buy and consume conventional foods.

Relatedness is a construct characterized by satisfaction and involvement with the social world (Kilpatrick et al., 2002). In this study, the term relatedness refers to the religious idea that halal-organic food is more religiously focused on Muslims than conventional food. As mentioned earlier, Muslim dietary guidelines suggest that Muslims eat halal food that is harmless and favorable to the psyche (Chaudry and Riaz, 2014). In addition, Muslim consumers prefer organic food (Wilkes et al., 1986) because food that is perceived as locally produced in Bangladesh is viewed as more hygienic, healthier, and safer (Liu et al., 2013) than conventional foods. This study infers that Muslim people feel connected and have greater belongingness to Islam and health through the purchase and consumption of halal-organic food than with conventional foods.

Self-determination needs and halal-organic purchasing behavior. Few studies have focused on the need determination theory in organic and halal food-purchasing research. For example, Tandon et al. (2020) applied the self-determination motivation theory to organic food research. However, they did not focus on the self-determination need theory.

Among the few studies that investigated the self-determination need theory in organic food research, Di Pasquale and Rivolta (2018) conceptualized the theory and suggested that its components of autonomy, competence, and relatedness positively impact children's eating behaviors.

In contrast, LaCaille et al. (2020) tested the self-determination theory in the USA and confirmed that need and autonomy satisfaction are statistically significantly related to eating behavior by analyzing 875 data points using the structural equation model. Since the above study focuses on eating behaviors, the authors consider the findings useful in understanding consumers' behaviors and formulating a relevant model.

To cross-validate the above quantitative study, the authors further reviewed a qualitative study by Reznickova and Zepeda (2016), who in a case study confirmed that the psychological needs for autonomy, competence, and relatedness are supportive of sustainable food consumption behavior. It is worth noting that the aspects of the green movement include ecological thinking and sustainability (Dangelico and Pontrandolfo, 2010), which are the same as organic food. Thus, the authors justified incorporating the findings of this study.

In light of the valid identified findings and suggestions, the authors included autonomy, competence, and relatedness as major components of the study's model, which would significantly and directly influence consumers' halal-organic food-purchasing behavior. In light of the above discussion, the following hypotheses are proposed:

H_{1a}: Autonomy has a direct positive impact on the continuance of halal-organic meat-purchasing behavior.

H_{2a}: Competence has a direct positive impact on the continuance of halal-organic meat-purchasing behavior.

H_{3a}: Relatedness has a direct positive impact on the continuance of halal-organic meat-purchasing behavior.

Self-determination needs and satisfaction. Satisfaction is defined as the level of overall contentment or pleasure perceived by a consumer as a result of the product or service quality to meet their expectations, desires, and needs (Mai and Ness, 1999). According to this definition, satisfaction occurs when consumer expectations are met (Namkung and Jang, 2007).

Verstuyf et al. (2012) investigated self-determination theory and suggested that satisfaction derived from basic needs (e.g., autonomy, competence, and relatedness) positively influences healthy eating behavior. Although the above studies did not directly address halal-organic food-eating behavior, the findings of this study are discussed with the belief that they will be useful in understanding halal-organic food-purchasing behavior and the generation of hypotheses. Furthermore, the current study incorporates eating behavior studies because self-determination theory has rarely been explored in organic and food-purchasing research, and the research aims to fill the knowledge gap.

In light of the above discussion, the authors anticipate that self-determination needs theory has a significant influence on the satisfaction of halal-organic food-purchasing behavior and hypothesize the following:

H_{1b}: Autonomy has a positive and significant impact on satisfaction with halal-organic meat.

H_{2b}: Competency has a positive and significant impact on satisfaction with halal-organic meat.

H_{3b}: Relatedness has a positive and significant impact on satisfaction with halal-organic meat.

Religiosity and Halal-organic purchasing behavior. In recent years, researchers and practitioners have paid increasing attention to the role of religiosity in consumer purchasing behavior. Religion is a set of practices and beliefs that influences people's choices and satisfaction. Religiosity differs from religion in that it refers to how religion influences an individual's life or decisions (Garg and Joshi, 2018). Religious affiliation and commitment, also known as religiosity, are powerful enough to influence an individual's cognition and behavior (Khan et al., 2020).

Previous studies, such as Said et al. (2014), Schiffman and Kanuk (2000), Mukhtar and Mohsin Butt (2012), and Weaver and Agle (2002), have revealed that religiosity influences consumers' consumption of halal products (Ahmadova and Aliyev, 2020). Wilkes et al. (1986) further mentioned that consumers with higher religiosity have a higher preference for local brands. As in Bangladesh, organic food is known as indigenous or "deshi" food (Prince and Wahid, 2020). This study argues that religiosity plays a significant role in purchasing organic food for the majority of religiously sensitive Bangladeshis, who constitute 89.1%, of the country's population at over 130 million Muslims (Haque et al., 2015).

In the contemporary literature, several studies have investigated the role of religiosity in purchasing halal food. Widodo (2013), along with Ahmadova and Aliyev (2020), found that religious values significantly influence Muslim consumers' intentions to purchase halal food. Usman et al. (2021) and Alam et al. (2011) also found that religiosity had a strong positive impact on the intention to purchase halal-certified food in Indonesia and Malaysia, respectively. By analyzing 110 data points with SmartPls, Ambali and Bakar (2014) further suggested that religious beliefs significantly influence Indonesian Muslims' halal food consumption. Meanwhile, Billah et al. (2020) investigated 267 consumers in Thailand and arrived at the same conclusion; religious factors influence Muslims' intentions to purchase halal food.

In contrast, Garg and Joshi (2018) found that religiosity had no significant impact on the purchase of halal food in India.

Although religiosity was found to contradict findings from two streams of research, this study considered the variable to

determine if it had any significant impact on purchasing halal-organic food in the context of Bangladesh. Furthermore, although religiosity has been studied in the context of halal food purchases, it has received little attention in organic food-purchasing research. The current study assumes that religiosity positively impacts the purchasing of halal-organic food and thus posits the following hypothesis:

H_{4a}: Consumers' religiosity has a direct positive impact on their continuance of halal-organic meat-purchasing behavior.

Religiosity and satisfaction

Some studies which investigated whether religiosity is associated with satisfaction, have confirmed that religiosity is strongly tied to satisfaction (Ayten and Korkmaz, 2019; Abror et al., 2019; Okulicz-Kozaryn, 2010; Hackathorn et al., 2016). However, few studies have examined the relationship between religiosity and satisfaction with purchasing halal or organic food. In research on halal food purchasing, Suhartanto et al. (2019) confirmed that religiosity has a positive direct effect on satisfaction, for which Indonesian consumers purchase halal food while analyzing 320 data points using SmartPls. The current study anticipates that religiosity will also have a direct positive effect on purchasing halal-organic food and thus hypothesizes the following:

H_{4b}: Consumers' religiosity has a positive direct effect on the satisfaction with halal-organic meat.

Halal-organic health benefits and purchasing behavior. A health benefit is a phenomenon in which food, substances, or activity improves health. Ahmadova and Aliyev (2020) mentioned that halal foods are hygienic, clean, qualitative, healthier, and better for the diet. In contrast, organic foods are described as:

> products that contain no chemicals, fertilizers, genetically modified organisms, pesticides, hormones, or antibiotics, are neither packaged nor processed, cause no harm to animals, require no injections for animals, are nutritious, tasty, and colorful; stay fresh longer; and were produced in labor-oriented production companies (Essoussi and Zahaf, 2008).

Hence, this study infers that halal-organic food has several health benefits, as evident from their definitions and preparation processes.

The health benefits of organic foods are the most important factor for consumers, as most organic food-purchasing studies in the literature have suggested (Prince and Krairit, 2017; Kapuge, 2016; Sampaio and Gosling, 2014; Lee and Goudeau, 2014; Hoefkens et al., 2009; Roitner-Schobesberger et al., 2008; Magistris and Gracia, 2008; Mondelaers et al., 2009; Padel and Foster, 2005). These benefits include core physical benefits, less pollution, safety, less contamination, and higher nutritional value of food (Prince and Krairit, 2017).

Meanwhile, studies including Billah et al. (2020), Ahmadova and Aliyev (2020), Chaudry and Riaz (2014), Ambali and Bakar (2014), and Widodo (2013) have investigated the health benefits of halal food and found that they are significant enough for consumers to buy food. The current study combined the health benefits of both halal and organic foods and proposed the following hypothesis:

H_{5a}: The health benefits of halal-organic meat have a direct positive effect on consumers' continuance of halal-organic meat-purchasing behavior.

Halal-organic health benefits and satisfaction. In halal food-purchasing research, Suhartanto et al. (2019) stated that the health quality of halal food has a direct and significant impact on customer satisfaction in Indonesia. Regarding organic food-purchasing research, Paul and Rana (2012) conducted face-to-face interviews with 463 respondents in India and indicated that the health benefits of organic food were statistically and positively satisfied consumers. As the above studies confirmed that the health benefits of both halal and organic foods have an impact on customer satisfaction, the current study posits the following hypothesis:

H_{5b}: The health benefits of halal-organic meat have a direct positive impact on consumers' satisfaction.

Satisfaction and Halal-organic purchasing behavior. In the field of halal food purchasing, Ali et al. (2020) found that halal brand satisfaction significantly influences consumers' intentions to purchase the food while analyzing 481 Chinese Muslim consumers' data points using a structural equation model. In a parallel study, Ali et al. (2018) further indicated that halal brand satisfaction has a direct and positive impact on Pakistani consumers' brand purchase intention. In contrast, Seconda et al. (2017) in a study of 17,446 consumers revealed that satisfaction is positively associated with the consumption of organic food in Finland. From the above findings, this study infers that satisfaction will positively influence consumers to purchase halal-organic food and thus proposes the following hypothesis:

H_6: Consumers' satisfaction with halal-organic meat directly and positively influences their continuance behavior to purchase the meat.

Halal-organic purchasing behavior and healthy life expectancy. Life expectancy is the average number of years a person is expected to live if age-specific mortality rates remain constant. By definition, life expectancy is based on an estimate of the average age of members of a particular population group when they die (Alam, 2021). In 2020, the life expectancy at birth in Bangladesh was 72.87 years. Life expectancy at birth in Bangladesh increased from 46.59 years in 1971 to 72.87 years in 2020 growing at an average annual rate of 0.92%. Significant factors in life expectancy include access to healthcare, hygiene, diet, nutrition, and lifestyle (World Data Atlas, 2020). These life expectancy factors are related to halal-organic foods, religiosity, and consumer self-determination needs, as is apparent in their definitions.

Hence, this study justifies the inclusion of life expectancy as a variable in its model. In this study, the term "healthy life expectancy" refers to the expectation of living a longer life with sound health and mind, such as being free of disability and morbidity (Alam, 2021). In other words, people do not want to become bedridden to live a longer life; rather, they want to live a longer life with little to no illnesses.

Few studies have examined how organic and halal food consumption affects consumers' healthy life expectancy. However, several studies have been discovered that focused on the construct of life expectancy in the research on regular food consumption. For example, Ranabhat et al. (2020) studied food consumption and life expectancy in 164 countries from 1992 to 2013, and they discovered that red meat and alcohol consumption negatively affected consumers' life expectancy. In line with this, Li et al. (2021) examined US population life expectancy from 2001 to 2014 and found that increasing expenditure on whole grains and dairy products, while decreasing expenditure on sugar-sweetened beverages and processed red meat, had a positive association with increased county-level life expectancy.

Sayogo (2018) further indicated that a healthy lifestyle positively influences Indonesian consumers to purchase halal food online, after analyzing 160 data points using regression analysis.

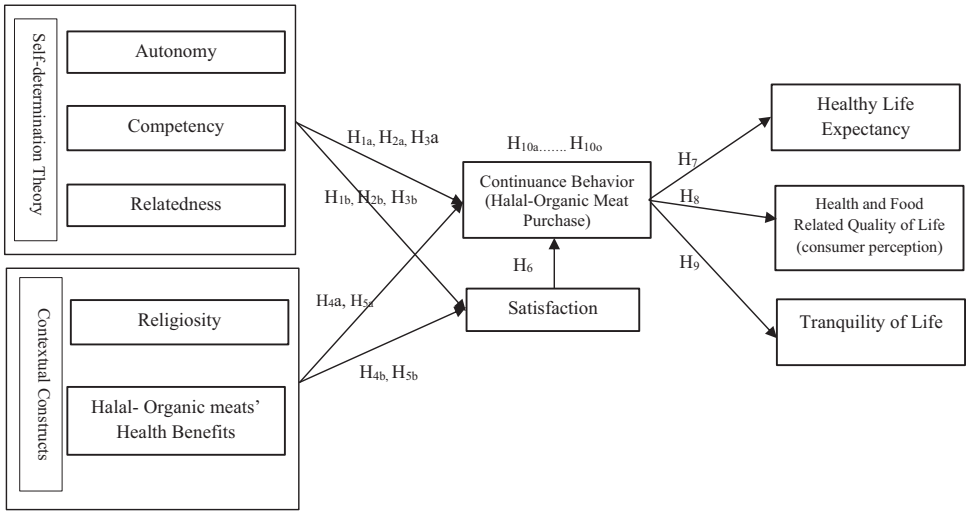

Fig. 1 The conceptual model.

Based on the above findings, this study concludes that halal-organic foods, both literally healthy (Liu et al., 2013) and Islamically acceptable (Chaudry and Riaz, 2014), increase consumers' healthy life expectancy. Based on the above discussion, we propose the following hypothesis:

H_7: Consumers' continuance of halal-organic meat-purchasing behavior directly and positively influences their healthy life expectancy.

Halal-organic purchasing behavior, HRQoL, and FRQoL (consumer perception). Health-related quality of life (HRQoL) can be measured in terms of living conditions, physical health, mental health, social relationships, level of independence, economic security, safety, or basic human rights. Food-related quality of life (FRQoL) evaluates the impact of diet, eating behaviors, and food-related anxiety on the quality of life. This is the first study to evaluate how halal and organic foods influence consumers' health- and food-related quality of life. However, in food-purchasing research, Casey et al. (2005) indicated that children's health-related quality of life depends on the food security of households in the USA. Roohinejad et al. (2017) also found that seaweed incorporated into meat significantly improved consumer health- and food-related quality of life. In light of the above findings, this study anticipates that halal-organic food consumption will positively influence consumers' HRQoL and FRQoL and thus suggests the following hypothesis:

H_8: Consumers' continuance halal-organic meat-purchasing behavior directly and positively influences their health- and food-related quality of life.

Halal-organic purchasing behavior and tranquility of life. According to Hornby and Wehmeier (1995), tranquility is "the state of being quiet and peaceful." The mind, body, and soul have a sacred connection and inner balance important to maintain. When we are calm, relaxed, and at peace, we are happier, more grateful, and more balanced. However, tranquility is important not only during times of low stress but also in times of difficulty and danger. If worries or negative thoughts refuse to leave, this can throw off our inner balance. Tranquility stabilizes our lives during unstable times; the easiest way to prioritize positive thoughts is to maintain tranquility, as it is the key to restoring balance and finding renewable energy (Richards, 2010).

This study argues that eating halal-organic food increases consumers' tranquility in life. Because halal-organic food is based on religious sentiment, Muslim consumers will feel that they are pleasing Allah and adhering to religious norms by consuming His recommended halal-organic food, ensuring that their minds are at peace. Few studies have investigated how consuming halal-organic food influences consumers' tranquility. However, Ellison et al. (2009) found that religious attendance and belief in the afterlife are positively associated with feelings of tranquility among US adults while analyzing 1996 data from the General Social Survey.

Few studies in the existing literature have suggested that halal-organic food-purchasing behavior affects the tranquility of life. Our study argues that halal-organic food is a religion-based food. Moreover, the findings of the above studies suggest that religion is significant in bringing forth a sense of tranquility in life. Therefore, this study assumes that consumers' continuance of halal-organic food-purchasing behavior would positively affect tranquility, and it thus proposes the following hypothesis:

H_9: Consumers' continuance of halal-organic meat-purchasing behavior directly and positively influences their tranquility of life.

Halal-organic purchasing behavior and mediation. Several studies on organic food-purchasing behavior have suggested that food purchase intention mediates the independent and dependent variables of purchase decisions (Ashraf, 2021; Aungatichart et al., 2020; Saleki et al., 2019). However, these studies did not investigate whether consumers' halal-organic food-purchasing behavior played a mediating role between the variables. Focusing on this knowledge gap, the current study attempted to investigate this condition and hypothesize the following:

$H_{10a...}$ H_{10o}: Consumers' continuance of halal-organic meat-purchasing behavior mediates the relationships between self-determination needs, religiosity, halal-organic health benefits, and life expectancy, health- and food-related quality, and tranquility.

Conceptual model

This study developed the following conceptual model and hypotheses based on the above research question, which was derived from the major knowledge gap evident in the inspection of several studies.

Figure 1, the conceptual model, demonstrates that self-determination needs such as autonomy (H_{1a}), competence (H_{2a}), and relatedness (H_{3a}), as well as contextual constructs such as religiosity (H_{4a}) and halal-organic meats' health benefits (H_{5a}), all impact halal-organic meat-purchasing behavior. The model further shows that autonomy (H_{1b}), competence (H_{2b}), and relatedness (H_{3b}) as well as religiosity (H_{4b}) and halal-organic meats' health

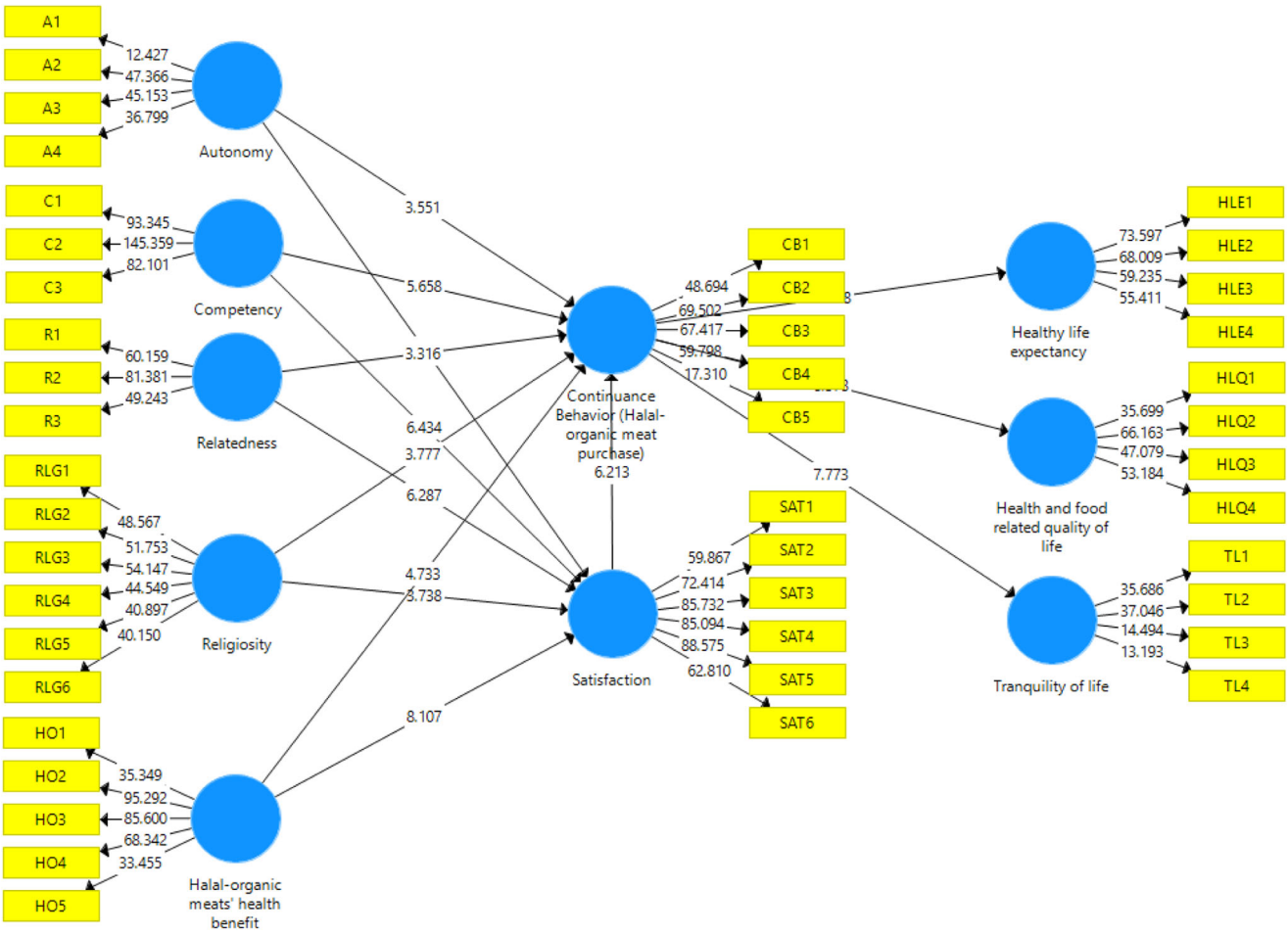

Fig. 2 The results of the structural equation model generated by SmartPls 3.0.

benefits (H_{5b}), positively impact consumer satisfaction. The model again indicates that consumers' satisfaction directly influences their continuance of organic-halal meat-purchasing behavior (H_6). In addition, the model delineates that consumers' continuance of halal-organic meat-purchasing behavior has a positive effect on their healthy life expectancy (H_7), health- and food-related quality (H_8) as well as the tranquility of life (H_9). Finally, the model depicts that consumers' halal-organic meat-purchasing behavior mediates the relationships between the study's five independent variables and three dependent variables (H_{10a}… H_{10o}) (Fig. 2).

Figure 2 shows that self-determination needs, religiosity, and halal-organic meats' health benefits influence consumer satisfaction and meat-purchasing behavior. Figure 2 further indicates that consumer satisfaction and meat-purchasing behavior affect life expectancy, health- and food-related quality, and tranquility of life.

Methodology

A three-pronged approach—questionnaire survey. The study applied a three-pronged approach of a literature review, expert interviews, and pilot surveys while preparing the survey questionnaire. The literature review determined what other studies on halal-organic food had been published around the world, and the authors used this information to create a questionnaire. This was later modified to include important points prevalent among Bangladeshi consumers, delving deeper into their minds and thoughts, as well as to eliminate literature bias from the questionnaire.

The authors then conducted expert interviews with academics and organic food marketers in Bangladesh to correct the questionnaire and incorporate their perspectives and ideas. They contacted marketing academics with a focus on consumer behavior, including professors from prestigious universities such as the Asian Institute of Technology in Thailand, the University of West London in the United Kingdom, Prince Mohammed Bin Fahd University in Saudi Arabia, and the University of Dhaka in Bangladesh. The authors also communicated with organic food marketers in Bangladesh to share business ideas and to capture the suggestions and views of the practitioners. Marketing managers of these companies provided additional feedback for the questionnaire.

To determine how well the consumers would receive this questionnaire, and to understand and incorporate their real-world perspectives, a pilot survey was carried out prior to the main survey. The authors conducted the final survey once these consumer viewpoints were captured.

Using the three-pronged approach described above, the authors created a survey questionnaire that was unbiased, non-threatening, and free of social desirability biases.

Measures. The study's ten constructs, listed below, were measured using a seven-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree):

Autonomy. Construct autonomy was assessed using four questions adapted from the studies conducted by LaCaille et al. (2020) and Miketinas et al. (2016):

1. If I had a choice, I would buy halal-organic food.
2. I feel free to make my own halal-organic food-buying decisions.
3. I feel free to express myself, my opinions, and my concerns about buying halal-organic food.
4. I think halal-organic foods have greater control in the market.

Competency. To assess the competency of halal-organic meat, the study used three questions adapted from Wang et al. (2021):

1. When engaging in halal-organic food-purchasing behavior, I feel like a competent person.
2. When engaging in halal-organic food-purchasing behavior, I feel very capable.
3. When engaging in halal-organic food-purchasing behavior, I feel very effective.

Relatedness. Our study used three questions adapted from Wang et al. (2021) to measure the religious relatedness of halal-organic meat:

1. When engaging in halal-organic food-purchasing behavior, I feel love and care toward my religion.
2. When engaging in halal-organic food-purchasing behavior, I feel a lot of closeness and intimacy with Islam and health safety.
3. When engaging in halal-organic food-purchasing behavior, I feel more connected to Islamic rituals and hygiene.

Religiosity. Levels of religiosity were assessed using six questions adapted from the studies conducted by Nurhayati and Hendar (2019), Haque et al. (2015), and Newaz (2014):

1. My religious beliefs lie behind my whole approach to life.
2. Religious beliefs influence the choice of halal-organic food products.
3. I consider religious obligations while buying halal-organic food products.
4. I have the knowledge to distinguish between permitted and prohibited foods suggested by my religion.
5. I think halal-organic food is my religion-based food.
6. I think consuming halal-organic food is a religious part of my life.

Halal-organic meats' health benefits. Our study included five questions regarding health benefits, adapted from the studies of Alimentarius (2020) and Ambali and Bakar (2014):

1. Halal-organic livestock are raised in a natural environment, fed organic feed, and are not given any unnecessary antibiotics harmful to livestock.
2. Halal-organic livestock are slaughtered following Muslim guidelines so that all blood is drained out of the birds or animals.
3. Halal-organic meat is prepared, processed, and manufactured with instruments or ingredients that are pure according to Islamic dietary guidelines.
4. Halal-organic meat is hygienic and healthy.
5. I believe that halal-organic meat is the most beneficial for my health.

Continuance behavior (halal-organic meat purchase). Consumer continuance behavior (halal-organic meat purchase) was evaluated using five questions adapted from Alalwan (2020), Faraoni et al. (2019), Lee et al. (2019), and Tandon et al. (2020):

1. I always try to buy halal-organic food.
2. If I have an opportunity, I will order halal-organic food.
3. I intend to keep ordering halal-organic food.
4. I intend to continue buying halal-organic food in the future.
5. During my last five food-shopping experiences, I bought halal-organic food.

Satisfaction. The study used six questions to assess consumers' satisfaction with halal-organic meat, adapted from the studies of Alalwan (2020), Anderson and Srinivasan (2003), and Shang and Wu (2017):

1. I am generally pleased to buy halal-organic food.
2. My choice to buy halal-organic food was wise.
3. I am very satisfied with buying halal-organic food.
4. I think I did the right thing in buying halal-organic food.
5. My halal-organic food shopping experience was very pleasant.
6. My halal-organic food shopping experience was absolutely delightful.

Healthy life expectancy. The study assessed the construct of healthy life expectancy using four questions from the studies of Tandon et al. (2020) and Alam (2021):

1. I would like to live a longer, morbidity-free life.
2. I think that consuming halal-organic food will extend my life expectancy.
3. I think that consuming halal-organic food will help me live a disability-free life.
4. I expect to live a healthy life by consuming halal-organic food.

HRQoL and FRQoL (consumer perception). Health- and food-related quality of life were measured using four questions adapted from a study conducted by Tandon et al. (2020):

1. I think that consuming halal-organic food will keep my body and mind sound.
2. I believe that eating halal-organic food will lower my medical costs.
3. I think that consuming halal-organic food is a sign of a healthy lifestyle.
4. Consuming halal-organic food improves the quality of my health- and food-related lifestyle.

Tranquility of life. We assessed the tranquility of life with four questions adapted from Richards (2010) and Ellison et al. (2009):

1. Buying halal-organic food is a part of my worship, which makes me stable and tranquil.
2. I am happy, tranquil, and cheerful when I buy halal-organic food.
3. It is wise to engage in halal-organic food-purchasing behavior to maintain tranquility in life.
4. I consume halal-organic food because it gives me new energy by rebalancing my body and mind.

Data collection. The authors used non-probabilistic sampling to collect data because the number of halal-organic food consumers in Bangladesh is unknown. The authors used a purposive sampling technique to collect data. This is because according to

Table 1 Descriptive statistics.

	Observations	Minimum	Maximum	Mean	Std. deviation
Age	985	1 (18–30 years)	4 (above 50 years)	2.63 (35–45) years	1.01
Education	985	2 (secondary school)	4 (post-graduation)	3.31 (graduation)	0.57
Occupation	985	1 (govt. service)	6 (garments/textiles)	5.02 (bank/non-bank fin. institutions)	0.64
Income	985	1 (Tk.20,999 or less)	6 (Tk.100,001 or more)	3.95 (61,000- Tk.80,999)	1.48
Marital status	985	0 (unmarried)	5 (divorce)	1.43 (married)	0.55
Family size	985	1 (single)	9 (above eight)	4.4 (4–5 members)	1.48

Table 2 Construct reliability and validity.

	Cronbach's alpha	rho_A	Composite reliability	Average variance extracted (AVE)
Autonomy	0.733	0.784	0.833	0.562
Competency	0.878	0.878	0.925	0.803
Continuance behavior (Halal-organic meat purchase)	0.839	0.847	0.888	0.618
Halal-organic meats' health benefit	0.875	0.877	0.910	0.671
Health and food-related quality of life	0.856	0.861	0.903	0.699
Healthy life expectancy	0.860	0.861	0.905	0.705
Relatedness	0.816	0.817	0.891	0.732
Religiosity	0.882	0.884	0.910	0.629
Satisfaction	0.920	0.921	0.938	0.715
Tranquility of life	0.775	0.822	0.848	0.586

purposive samplings, researchers survey only those respondents who can provide the best information to achieve the study's objective (Kumar, 2018). As a result, halal-organic food consumers are the study's target group because they have the relevant knowledge to assist the study in achieving its goals.

Finally, we conducted a physical survey of halal-organic meat customers in Bangladesh. The authors surveyed consumers who buy organic and halal meat from large supermarkets (e.g., Shwapno, Family Needs, Agora, and Meena Bazar) to identify niche consumers who were interested in purchasing halal-organic meat.

The authors also visited individual butchers who slaughtered organic cows and goats following Hukum Sariah (i.e., Islamic dietary guidelines) on weekends and sold the meat. Thus, the authors surveyed Muslim consumers who buy meat on weekends to obtain halal and organic fresh meat as a means to satisfy the judgmental sampling technique and reach the depths of Muslim consumers' minds.

In Bangladesh, many organic chicken and duck vendors sell live organic birds in municipal markets. When a seller sells a bird, it is slaughtered in front of the customer in a halal manner, instantly processed in a machine, and then delivered. The best part of purchasing from these vendors is that customers can see if the birds are organic and slaughtered in a halal way. The authors also surveyed customers who purchase halal-organic birds from these vendors to identify those who are genuinely knowledgeable about the study's topic. Furthermore, 91.04% of the people in Bangladesh are Muslim. From ancient times, Bangladeshi Muslim butchers and meat sellers used to practice slaughtering birds and animals in a halal way. Recently, the Consumers Association of Bangladesh has begun monitoring the meat production to the distribution process, including the slaughter of birds and animals, to ensure that they are slaughtered in accordance with Islamic dietary guidelines. As a result, only halal meat is available in the country.

The study also collected data via Google Forms from consumers who buy halal-organic meat through online platforms. Thus, this study used both a physical and an online survey to identify niche consumers interested in purchasing halal-organic meat from supermarkets, municipalities, open air, and online markets in Bangladesh. Data was collected from February to April 2022.

Analysis and results

The descriptive statistics of the 985 respondents are shown in Table 1, which reveals that the majority of the participants were between 35 and 45 years old and held a bachelor's degree. In terms of occupation and income, the majority of respondents worked in bank or non-bank financial institutions and earned a monthly average ranging from 61,000 to 80,000 taka. Table 1 also shows that most respondents were married and had families with up to 4–5 people. The standard deviations for all of the above measures ranged from 1.48 to 0.55.

Measurement model. This study used Cronbach's alpha, roh A, and composite reliability for reliability and the average variance extracted for the validity of the study's constructs, as recommended by Hair et al. (2017) and Saunders et al. (2009).

To ensure the constructs' reliability and validity, the values of Cronbach's alpha, roh_A, and composite reliability should be >0.70, and the average variance extracted (AVE) should be >0.5, (Hair et al., 2017; Saunders et al., 2009). As shown in Table 2, all criteria (Cronbach's alpha, roh A, CR, and AVE) were met for all 10 constructs of the study model. Hence, the model's construct satisfied both the reliability and validity conditions.

Discriminant validity. Discriminant validity was used to validate the measurement model. The Fornell and Lacker criteria are shown in Table 3, where all diagonal values (i.e., the square root of AVE) are greater than the off-diagonal values (i.e., the correlations among the variables). In other words, the square root of each construct's AVE was placed diagonally, exceeding its highest correlation coefficients with the other constructs, indicating the attainment of discriminant validity (Hair et al., 2017; Henseler et al., 2015).

The study also conducted a blindfolding calculation to check the cross-validated redundancy of the constructs. To satisfy the cross-validation redundancy test, the Q-squared value of the construct must be greater than zero (Rehman, 2022). Table 4

Table 3 Fornell–Larcker criterion.

	Autonomy	Competency	Continuance behavior (halal-organic meat purchase)	Halal-organic meats' health benefit	Health and food-related quality of life	Healthy life expectancy	Relatedness	Religiosity	Satisfaction	Tranquility of life
Autonomy	0.75									
Competency	0.208	0.896								
Continuance Behavior (Halal-organic meat purchase)	0.32	0.49	0.786							
Halal-organic meats' health benefit	0.279	0.439	0.39	0.819						
Health and food-related quality of life	0.724	0.165	0.293	0.251	0.836					
Healthy life expectancy	0.258	0.444	0.774	0.302	0.215	0.84				
Relatedness	0.204	0.323	0.414	0.148	0.195	0.367	0.855			
Religiosity	0.165	0.205	0.32	−0.079	0.188	0.296	0.477	0.793		
Satisfaction	0.306	0.469	0.536	0.422	0.252	0.496	0.45	0.296	0.845	
Tranquility of life	0.446	0.198	0.26	0.323	0.346	0.227	0.194	0.153	0.21	0.766

Table 4 Construct cross-validated redundancy.

	SSO	SSE	Q^2 (=1−SSE/SSO)
Autonomy	3940.000	3940.000	
Competency	2955.000	2955.000	
Continuance behavior (Halal-organic meat purchase)	4925.000	3659.667	0.257
Halal-organic health benefit	4925.000	4925.000	
Health and food-related quality of life	3940.000	3708.380	0.059
Healthy life expectancy	3940.000	2291.831	0.418
Relatedness	2955.000	2955.000	
Religiosity	5910.000	5910.000	
Satisfaction	5910.000	4224.336	0.285
Tranquility of life	3940.000	3790.681	0.038

indicates that the Q^2 value of the study's constructs is >0, suggesting satisfactory predictive relevance of the model.

Structural equation model

Model fit. The authors used RMS theta to confirm the model fit of the study. According to Henseler et al. (2015) and Hu and Bentler (1998), the rms theta value should be <0.12. The study's research model satisfied the cutoff values (rms theta = 0.11), indicating a good model fit.

To be statistically significant, a relationship must have *T*-statistics > 1.96 and a *p*-value of <0.05 (Basbeth Firdaus, 2017). Table 5 shows that each independent variable has a significant impact on the dependent variables, based on the *T*-statistics and *p*-values. Hence, this study confirms that all the direct relationships are significant (H_{1a}…. H_9).

Mediation analysis. We also conducted consistent PLS bootstrapping using Smart PLS 3 to test the mediation analysis, as shown in the following table:

To have a statistically significant mediating relationship, the *P*-values of mediation test results should be <0.05 (Gaskin, 2017). Table 6 demonstrates that consumers' continuance behavior (halal-organic food purchases) mediates the relationship between the study's five independent variables and three dependent variables (H_{10a}……. H_{10o}), thus confirming the significance of the study's mediating relationships.

Discussion

This study hypothesized that self-determination needs, such as autonomy (H_{1a}), competency (H_{2a}), and relatedness (H_{3a}) of halal-organic meat, have a direct positive impact on halal-organic meat-purchasing behavior and found these hypotheses to be significant. These findings support those of previous studies conducted by Di Pasquale and Rivolta (2018) and Reznickova and Zepeda (2016).

As in most Muslim-majority countries, meat in Bangladesh is generally halal. Organic and non-organic chicken, duck, cow, and goat meat is available throughout the country (Hussain and David, 2013). Several criticisms have been raised regarding non-organic meat. First, meat producers frequently feed their birds contaminated poultry feed because it is inexpensive, widely available, and ensures the faster growth of birds. This feed contains chromium, which is detrimental to human health, and it is created from scraps of tannery waste handled by recycling plants (Munna, 2014). Second, they give birds and animals non-nutritional feed containing antibiotics, genetically modified organisms, antifungals, arsenicals, and hormones to stimulate their growth and meet demands for meat, despite profiting unethically. Finally, preservatives such as formalin can be mixed with meat to increase its shelf life in various shops and outlets. From production to distribution, these immoral methods have the potential to cause meat poisoning and harm the liver, kidneys, muscles, and other organs of the human body (Ahammad, 2018).

According to this study, halal-organic meat is natural, pure, tender, and fresh, and has religious approval; its preparation also emphasizes hygiene and meat quality from production to

Table 5 Hypotheses test results (direct effect).

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	*T* statistics (|O/STDEV|)	*P* values	Result
H_{1a}: Autonomy → continuance behavior (halal-organic meat purchase)	0.111	0.11	0.031	3.578	0	Supported
H_{1b}: Autonomy → satisfaction	0.112	0.113	0.029	3.888	0	Supported
H_{2a}: Competency → continuance behavior (halal-organic meat purchase)	0.219	0.217	0.04	5.519	0	Supported
H_{2b}: Competency → satisfaction	0.219	0.218	0.037	5.979	0	Supported
H_{3a}: Relatedness → continuance behavior (halal-organic meat purchase)	0.125	0.126	0.036	3.446	0.001	Supported
H_{3b}: Relatedness → satisfaction	0.253	0.254	0.039	6.445	0	Supported
H_{4a}: Religiosity → continuance behavior (halal-organic meat purchase)	0.139	0.141	0.036	3.893	0	Supported
H_{4b}: Religiosity → satisfaction	0.133	0.133	0.035	3.813	0	Supported
H_{5a}: Halal-organic meats' health benefit → continuance behavior (halal-organic meat purchase)	0.156	0.158	0.033	4.749	0	Supported
H_{5b}: Halal-organic health benefit → satisfaction	0.268	0.268	0.034	7.867	0	Supported
H_{6}: Satisfaction → continuance behavior (halal-organic meat purchase)	0.236	0.235	0.038	6.215	0	Supported
H_{7}: Continuance behavior (halal-organic meat purchase) → healthy life expectancy	0.774	0.774	0.015	51.31	0	Supported
H_{8}: Continuance behavior (halal-organic meat purchase) → Health and food-related quality of life	0.293	0.293	0.035	8.287	0	Supported
H_{9}: Continuance behavior (halal-organic meat purchase) → tranquility of life	0.26	0.261	0.034	7.549	0	Supported

Table 6 Hypotheses test results (mediation effect).

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	*T* statistics (|O/STDEV|)	*P* values	Result
H_{10a}: Autonomy → continuance behavior (halal-organic meat purchase) → healthy life expectancy	0.115	0.114	0.037	3.088	0.002	Supported
H_{10b}: Autonomy → continuance behavior (halal-organic meat purchase) → health and food-related quality of life	0.043	0.044	0.017	2.559	0.011	Supported
H_{10c}: Autonomy → continuance behavior (halal-organic meat purchase) → tranquility of life	0.039	0.040	0.015	2.679	0.008	Supported
H_{10d}: Competency → continuance behavior (halal-organic meat purchase) → healthy life expectancy	0.220	0.216	0.047	4.709	0.000	Supported
H_{10e}: Competency → continuance behavior (halal-organic food purchase) → health and food-related quality of life	0.083	0.082	0.020	4.068	0.000	Supported
H_{10f}: Competency → continuance behavior (halal-organic meat purchase) → tranquility of life	0.075	0.074	0.019	4.065	0.000	Supported
H_{10g}: Relatedness → continuance behavior (halal-organic meat purchase) → healthy life expectancy	0.126	0.125	0.049	2.557	0.011	Supported
H_{10h}: Relatedness → continuance behavior (halal-organic meat purchase) → health and food-related quality of life	0.048	0.048	0.020	2.428	0.016	Supported
H_{10i}: Relatedness → continuance behavior (halal-organic meat purchase) → tranquility of life	0.043	0.043	0.018	2.378	0.018	Supported
H_{10j}: Religiosity → continuance behavior (halal-organic meat purchase) → healthy life expectancy	0.134	0.135	0.044	3.024	0.003	Supported
H_{10k}: Religiosity → continuance behavior (halal-organic meat purchase) → health and food-related quality of life	0.051	0.051	0.017	2.957	0.003	Supported
H_{10l}: Religiosity → continuance behavior (halal-organic meat purchase) → tranquility of life	0.046	0.047	0.016	2.812	0.005	Supported
H_{10m}: Halal-organic meats' health benefit → continuance behavior (halal-organic meat purchase) → healthy life expectancy	0.151	0.152	0.044	3.424	0.001	Supported
H_{10n}: Halal-organic meats' health benefit → continuance behavior (halal-organic meat purchase) → health and food-related quality of life	0.057	0.058	0.018	3.250	0.001	Supported
H_{10o}: Halal-organic meats' health benefit → continuance behavior (halal-organic meat purchase) → tranquility of life	0.052	0.053	0.017	3.007	0.003	Supported

distribution. Consequently, halal-organic meat has a better reputation than non-organic meat in terms of autonomy (i.e., consumers' freedom to choose their preferred meat and greater control in the market) competence, love towards Islamic religion and rituals, hygiene, and health safety issues. Thus, halal-organic meat has a stronger market reputation and position than non-organic halal meat and stands out among food products.

The study again found that self-determination needs, such as autonomy (H_{1b}), competency (H_{2b}), and relatedness (H_{3b}), positively and significantly impact satisfaction with halal-organic meat. When Bangladeshi consumers feel that they have the freedom to choose meat, market control, a sense of competence, love for the Islamic religion and rituals, hygiene, and awareness of health safety, they feel physically and emotionally pleased, delightful, wise, and satisfied that their expectations are met. These findings are consistent with those of Verstuyf et al. (2012) on eating behavior research. At the same time, these findings are also new in several areas of food-purchasing behavioral research: halal, organic, and a combination of the two.

The current study again confirmed that consumers' religiosity has a direct positive impact on their continued halal-organic meat-purchasing behavior (H_{4a}) and satisfaction (H_{4b}) with halal-organic meat. These results coincide with those of Billah et al. (2020), Widodo (2013), Ambali and Bakar (2014), Ahmadova and Aliyev (2020), Alam et al. (2011), and Suhartanto et al. (2019) in halal food-purchasing research but contradict Garg and Joshi (2018).

According to the Islamic religion, Muslims should only consume permissible foods (i.e., halal) and not anything that is prohibited (i.e., haram). Furthermore, organic meat, also known as indigenous or deshi meat in Bangladesh, is considered religious food (Wilkes et al., 1986). Hence, when meat is labeled as "halal-organic," it both follows Islamic religious guidelines and promises purity and naturalness.

This study confirmed that the health benefits of halal-organic meat have a direct positive effect on consumers' continued halal-organic meat-purchasing behavior (H_{5a}) and satisfaction (H_{5b}). These findings are consistent with those of Billah et al. (2020), Ahmadova and Aliyev (2020), Chaudry and Riaz (2014), Ambali and Bakar (2014), Widodo (2013), Prince and Krairit (2017), Kapuge (2016), Sampaio and Gosling (2014), Lee and Goudeau (2014), Hoefkens et al. (2009), Roitner-Schobesberger et al. (2008), Magistris and Gracia (2008), Mondelaers et al. (2009), Padel and Foster (2005), Suhartanto et al. (2019), and Paul and Rana (2012) on halal and organic food-purchasing research. Halal-organic meat has several health benefits. For instance, halal-organic livestock are raised in natural environments, fed organic feed, and not given any unnecessary, harmful antibiotics that could contaminate their meat. Upon satisfactory growth, the livestock are slaughtered following Muslim guidelines so that all the blood drains out of their bodies, leaving the meat fresh and tender. The meat is prepared with pure instruments and ingredients in accordance with Islamic dietary guidelines. Thus, meat is hygienic, healthy, and is considered the most beneficial for one's health. These benefits influence meat consumers' continued halal-organic meat purchasing and satisfaction.

The current study further confirmed that consumer satisfaction with halal-organic meat directly and positively influences their continuance behavior in purchasing meat (H_6). The findings of this study support those of Ali et al. (2020), Ali et al. (2018), and Seconda et al. (2017) who conducted research on halal and organic food purchasing. Hence, our study infers that Bangladeshi customer satisfaction leads to repeat purchases and new referrals through positive word-of-mouth communications, forms a major portion of revenue, and generates moral support for the business.

This study again found that consumers' continuance of halal-organic meat-purchasing behavior directly and positively influences their healthy life expectancy (H_7). This finding is consistent with the study by Sayogo (2018) on halal food purchasing. Bangladesh is one of the most densely populated countries in Asia with 150 million inhabitants. Among them, 45 million people suffer from foodborne diseases or food poisoning (Ahmed, 2014). Unscrupulous traders use preservatives and formalin to preserve meat, and textile dyes to make food shiny and colorful. These toxic chemicals and food preservatives can have short- and long-term effects on human health, causing ailments ranging from diarrhea to cancer. Therefore, conscious Bangladeshi consumers consume halal-organic meat for morbidity-free, disability-free, healthy, and longer lives.

This study further found that consumers' continuance of halal-organic meat-purchasing behavior directly and positively influences their health- and food-related quality of life (H_8). This finding is consistent with those of Roohinejad et al. (2017) and Casey et al. (2005), who conducted research on food consumption behavior. Few studies have investigated health- and food-related quality of life in halal and organic food consumption. From a methodological standpoint, this study adds a new dimension to the existing literature on halal and organic food consumption. The authors believe that this new dimension in the halal-organic food-purchasing research field can open new avenues for exploring how the perception of health benefits leads to greater and possibly better decision-making in food purchases.

As mentioned earlier, poultry meat in Bangladesh is adulterated with contaminated feed, antibiotics, genetically modified organisms, antifungals, arsenicals, hormones, and formalin (Ahammad, 2018). Consequently, conscious consumers avoid the source of nutrition because of the possibility of food toxicity, which in turn can lead to the possible exclusion of vital nutrients in their food habits and intake of people (Bayes, 2018).

The current study confirmed that consumers' continuance of halal-organic meat-purchasing behavior directly and positively influences their tranquility of life (H_9). These findings are consistent with those of the study conducted by Ellison et al. (2009) in religious and mental health research. As very few studies have investigated the tranquility of life in relation to purchasing halal and organic food, this study has again included a new dimension to the current literature. This is extremely important in the sense that a sense of tranquility is vital in ensuring a happy life; hence, it is essential to assess the extent to which halal-organic meat-purchasing behavior influences this factor.

Hasan et al. (2021) reported that, among the entire adult Bangladeshi population, 57.9% suffered from depression, 59.7% experienced stress, and 33.7% experienced anxiety. Although factors such as the environment, negative thoughts, life experiences, and unhealthy habits can lead to mental illness, the recent COVID-19 pandemic has especially wreaked havoc on Bangladeshi mental health. Such mental illnesses can impair one's ability to live a fulfilling life and perform work or family responsibilities. According to this study, halal-organic meat is a religion-based food, and Bangladeshi customers purchase it as part of their prayers, which makes them happy, stable, and tranquil.

The study further found that consumers' continuance of halal-organic meat-purchasing behavior mediates the relationships between autonomy, competency, relatedness, religiosity, halal-organic health benefits, healthy life expectancy, health- and food-related quality, and tranquility of life (H_{10a}–H_{10o}). In other words, when consumers consider purchasing halal-organic meat, they believe that their self-determination needs, religiosity, and the health benefits of halal-organic meat will develop healthy life expectancy, health- and food-related quality, and tranquility of life. Ultimately, this study's main theory and contextual

constructs indirectly influence consumers' sanctity of life through the purchase of halal-organic meat.

Contribution

For academics. The contribution of this study to academia is robust, extensive, and practical. First, the study is the first to devise and apply a Muslim sentiment-based business model including the term "halal-organic" products that are being produced and sold in numerous Muslim countries around the globe, but without the specified distinctness. Hence, this study introduces a concept that adds to the existing research on halal and organic food-purchasing behavior. Academics from all over the world can use this model to investigate similar research topics in which sustainable food consumption is a concern.

Second, there is immense importance in investigating the self-determination need theory in organic and halal food-purchasing research. Few studies have investigated the theory in organic food-purchasing research, and none have investigated it in halal food-purchasing research (Di Pasquale and Rivolta, 2018; Reznickova and Zepeda, 2016). This study further extends the theory's generalizability and applies existing concepts to new horizons regarding organic and halal food-purchasing research.

Third, the study introduced two new constructs in both organic and halal food-purchasing behavioral research: health- and food-related quality and tranquility of life. Furthermore, halal and organic food research have separately investigated the study's contextual construct of halal-organic meats' health benefits. However, this is the first study to combine the health benefits of these two products and innovate the concept of "halal-organic food," thereby generating new research areas. Furthermore, the third contextual construct of religiosity has rarely been studied in organic food, although few studies have investigated the construct in halal food purchasing research. Thus, by investigating religiosity, this study contributes to both halal and organic food-purchasing behavioral research.

Fourth, this study's empirical findings will guide other academics in choosing significant variables when conducting further research focusing on other scopes. In other words, future researchers may use the findings of the current study to investigate what values and contexts are important in other countries when it comes to halal-organic food purchasing behavior. Hence, the model can be tested by academics in any other part of the world on a topic similar to the debate, allowing us to compare results from different countries and eventually learn more about ourselves and the world around us.

For practitioners. The findings of this study can be used to make practical recommendations. For instance, the study found that self-determination needs, such as autonomy, competency, and relatedness of halal-organic meat, have a direct positive impact on the continuance of halal-organic meat-purchasing behavior. Therefore, the authors recommend that organic halal meat producers and concerned authorities should focus on the key benefits of meat to demonstrate its superiority. They should broadcast attractive advertisements on television, newspapers, and other social media platforms emphasizing purity, naturalness, safety, eco-friendliness, tenderness, freshness, religiosity, and sanctity of meat. This is because effective advertising attracts Bangladeshis more than any other marketing strategy does. This will greatly boost the profit of halal-organic meat, attracting more entrepreneurs to invest in businesses, generating more capital and employment, and eventually contributing to the economic development of the country.

The results further indicate that self-determination needs, such as autonomy, competency, and relatedness, have a positive and significant impact on satisfaction with halal-organic meat. Halal-organic meat accounts for only 1% of the entire market in Bangladesh (Rahman, 2019). Therefore, to attract and satisfy more customers, halal-organic meat producers and concerned authorities must expand their marketing channels and sell their meat not only face-to-face but also through online platforms. This is a viable and profitable venture, as the COVID-19 pandemic has dramatically increased online purchasing behavior in Bangladesh and has significantly shifted purchasing behavior in general. In addition, Bangladesh's online market has been expanding since 2013 due to the launch of various online shops, such as Chaldal.com, KhaasFood, Organic Online BD, Parmeeda, and other organic food sellers. Furthermore, the pandemic and subsequent restrictions on public interaction have popularized organic online shopping (Debter, 2020). Consequently, halal-organic meat producers can sell their products through existing online platforms, which have enormous potential to attract and satisfy customers.

This study found that religiosity has a direct positive impact on customers' halal-organic meat-purchasing behavior and satisfaction with halal-organic meat. For Muslim people, consuming halal-organic would first and foremost mean obeying Allah, and second means finding solace in their consumption of safe, harmless food. Once halal-organic food marketers are able to effectively communicate that organic food is religion-based, it will appeal to Bangladeshi Muslims' religious sentiments; this, as a result, will significantly increase both food sales and Muslim consumers' satisfaction. The study claims that because halal-organic meat is pure, natural, authentic, and safe by definition, it will appeal to not only the 130 million Bangladeshi Muslims but also to the 19.138 billion non-Muslims, 1.2 billion atheists, and 1.19 billion unaffiliated people around the world (Ambali and Bakar, 2014; Codex Alimentarius, 2020). Several strategies can effectively communicate the appeal of meat to consumers worldwide. These include press advertising, conversational marketing, internet marketing, search engine optimization (SEO), social media advertising, direct mail, social networks, and viral marketing. Once halal-organic meat producers implement these strategies, meat consumers will better understand the general benefits of meat, increasing meat sales not only in Bangladesh but also in the rest of the world.

Our findings show that the health benefits of halal-organic meat have a direct positive effect on consumers' continued purchase behavior and satisfaction. However, this study is limited to a niche group of Muslim consumers who buy meat in Bangladesh. Therefore, this study suggests that meat producers and concerned authorities publicize the health benefits of halal-organic meat (e.g., its freshness, tenderness, and cleanliness) not only in Bangladesh but also globally, targeting both Muslim and non-Muslim consumers interested in purchasing meat. When meat consumers recognize the appeal of meat, they appreciate it, purchase it, and remain satisfied. As a result, meat sales are expected to increase both locally and globally.

The study again found that consumer satisfaction with halal-organic meat directly and positively influences their meat-purchasing behavior. To increase customer satisfaction and ensure continued meat-purchasing behavior, this study recommends several actions. First, halal-organic meat producers should use multichannel marketing and sales media, including direct and online selling support, to satisfy consumer orders. They can design user-friendly websites and create content that fits customer requirements. Through social media marketing, they can ask for feedback across all touchpoints, and they can respond to and share said feedback across the team. This will help marketers integrate consumer expectations with the service. Furthermore, they can use paid advertisements and recruit the right employees

to regularly measure customer satisfaction. Through these methods, halal-organic meat producers can create long-lasting enterprises across the country. Moreover, new halal-organic meat producers from other parts of the world can follow these plans to succeed in their businesses.

Our study confirms that consumers' continuance of halal-organic meat-purchasing behavior directly and positively influences healthy life expectancy. The study suggests that organic meat producers and concerned authorities should work together to ensure that doctors advise halal-organic meat to their patients. When meat marketers implement this strategy, meat sales in the country are expected to increase and consumers' life expectancy will improve.

These results again indicate that consumers' continuance of halal-organic meat-purchasing behavior directly and positively influences their health- and food-related quality of life. Halal-organic meat is less polluted, safer, and healthier from meat production to distribution, which helps to keep the human body and mind healthy, as well as lower medical costs, ensuring good HRQoL and FRQoL. Hence, halal-organic meat producers should focus on the meat's strengths and publicize them to a broad consumer segment, which will increase their sales and profit as well as consumers' health- and food-related quality of life. The ultimate culmination of this behavior will first involve an increase in halal-organic meat purchases while also improving the overall health and life expectancy of the population of a country.

Our study further confirms that consumers' continuance of halal-organic meat-purchasing behavior directly and positively influences their tranquility of life. Therefore, this study suggests that halal-organic meat marketers target mental health service providers, including psychologists, psychiatrists, and religious centers, such as mosques, to advertise their products. If doctors and priests advise people to eat healthy and safe meat in addition to their regular treatment, meat sales and profits will skyrocket, assisting in the creation of a healthy nation that will in turn develop consumers' tranquility. In the long run, the country is expected to have a productive and healthy population capable of driving the economy and eventually creating a prosperous nation.

The results further show that consumers' continuance of halal-organic meat-purchasing behavior mediates the relationships between autonomy, competency, relatedness, religiosity, halal-organic health benefits, healthy life expectancy, HRQoL, FRQoL, and tranquility of life. As halal-organic meat is viewed as a novel in consumers' minds, meat marketers should ensure that they ensure the meat's qualities to attract the masses which will ensure food sales, profit, and a physically and mentally healthy nation. To achieve this, an appropriate market segment must be used to accurately portray and describe the benefits of halal-organic meat to further drive sales and improve the overall quality of life in the country.

Limitations and future research. The current study combines two fields of research—halal and organic—into the new concept of "halal-organic." Therefore, existing theories and models such as the theory of planned behavior, consumption value theory, theory of reasoned action, stimuli-organism-response model (SOR) can be applied to this new field of halal-organic food-purchasing research. The same can be said with applying constructs such as price, verbal recommendation, trust, attitude, halal and organic certificates, brand reputation, and self-efficacy. Additionally, future research can test this study's model in either halal or organic food-purchasing research, as it is based on an emerging theory and a few novel, rarely studied constructs.

Since the model is new and has covered a completely untouched area of focus, the culminating purpose of this study is to inspire more research in fields that may initially seem obvious and shallow but are rather distinct and comprehensive. This study proves that there is immense potential for exploration into the nooks and crannies of seemingly natural fields of research.

Data availability

The raw data used for this study are included in the supplementary information.

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Competing interests
The authors declare no competing interests.

Ethical approval
The ethical committee of the Bangladesh Institute of Governance and Management accepted the protocol of the article.

Informed consent
All respondents signed an interview consent form prior to participating in the survey.

Additional information
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